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AUTHOR Workman, Susan; And Others
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ABSTRACT

This presentation describes the development, implementation and evaluation of videotaped presentations on skills for assessing special needs in young children for a Montana State University's Home Economics Course. The purpose of this project was to develop instructional materials which provide: (1) consistent and repeatable observational experiences; (2) simulated testing and scoring opportunities; (3) accurate and immediate feedback regarding scoring and interpretation; and (4) individualized pacing. The evaluation had four components: (1) a context evaluation on the educational environment and unmet needs; (2) an input evaluation summarizing supportive research; (3) a process evaluation providing feedback relative to implementation strategies; and (4) a product evaluation of project effectiveness. A combination of statistical and descriptive measures were used to assess the videotape's effectiveness: (1) tests of perceived observational and testing ability of control and experimental students; (2) random telephone interviews; and (3) a student questionnaire. Results indicate students benefited from observing a role model interact with a child in an actual testing situation. Student performance was higher for individualized viewing than for group presentation. Individualized pacing, practice and feedback appear to positively influence students' perceptions of their learning. Appendices contain: (1) Student Competence Questionnaire; (2) proposal format and cost estimates; (3) telephone interviews; and (4) the Student Videotape Evaluation Questionnaire and response summary. (BS)

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ABSTRACT

THE UTILIZATION OF VIDEO TAPED INSTRUCTION IN THE TEACHING OF ASSESSMENT SKILLS: A CASE STUDY

Susan Workman, Montana State University
Connie Dillon, Cameron U.
Cynthia Baxter, Montana State University

This presentation describes the design, implementation and evaluation of a series of video taped presentations developed for the teaching of the skills required for the assessment of special needs in young children. The purpose of this project was to develop instructional materials which would provide: 1) Consistent and repeatable observational experiences, 2) Simulated testing and scoring opportunities, 3) Accurate and immediate feedback regarding scoring and interpretation, 4) Individualized pacing for an assessment course.

Description of Needs. Prior to the implementation of this project, instruction relied on a combination of lecture, discussion and role playing exercises. Students also participated in observation sessions and practicum experiences with children arranged on an individual basis. However, increasing enrollments and scheduling problems reduced observation opportunities. Students had little practice with the testing instruments and lacked feedback during practice. Finally students were forced to proceed at a pace determined by the group.

Review of the Literature. Research in instruction design indicates that the design of instruction should be based upon an analysis of the types of learning demanded by the content, the media attributes, the learner characteristics and learning conditions. The design factors which impact the learning of assessment skills include organization of content, the role models selected, opportunities for practice, immediate feedback and self pacing. Video tape was selected because of certain features

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including concreteness, motion, individualized pacing and the elimination of time and distance constraints.

Evaluation Procedures. The effectiveness of the video tape materials was determined through a combination of statistical and descriptive measures. An instrument was developed comparing the perceived observational and testing ability of two groups: a control group who received that traditional instruction during the Fall 1982 quarter; and an experimental group receiving the video taped instruction during the Fall 1983 quarter. The descriptive measures given the experimental group included random telephone interviews conducted throughout the course and results of a questionnaire administered at the conclusion of the course. The students were not randomly sampled and no pretest was administered to eliminate differences in entering knowledge or abilities.

Results. Analysis of the descriptive measures indicated that the students benefited from observing a role model interact with a child at an actual testing setting. The students also felt that the ability to review the tapes and practices with the testing instruments proved helpful. (The students complained about the playback environment and the inability to read the small print on the television screen.)

Statistical results indicate that the students performed significantly higher on the video tapes viewed in an individualized setting. There was no difference between the traditional class instruction and the video presentation viewed as a group in the classroom. It appears that individualized pacing, practice and feedback are features which had a positive influence on students' perception of their learning of assessment skills.

AN EVALUATION OF VIDEO TAPED

INSTRUCTION IN THE TEACHING OF ASSESSMENT SKILLS

As educational institutions explore the utilization of technology in instruction, it is important to develop systems which provide information regarding the effectiveness of technology in order to feed future planning decisions. The purpose of this paper is to describe the development, implementation and evaluation of a series of instructional materials designed for a course in early childhood education for Montana State University's Department of Home Economics. This evaluation consisted of four major components: a context evaluation which described the educational environment and unmet needs; an input evaluation which summarized the research and theory supporting the instructional design; a process evaluation which provided feedback relative to implementation strategies; and a product evaluation which assessed the effectiveness of the final project (Webster, 1976).

Context Evaluation

Environment of Interest

The instructional materials were developed for a senior level course entitled "Assessment of Special Needs in Early Childhood" (HEC 469), taught for the Department of Home Economics in the College of Education at Montana State University. The primary target audience was composed of students in child development, family life and elementary education. As a 400 level offering, this course can also be used within a graduate program, thus serving many masters and doctoral level students.

Prior to implementation of the project, the class format included lecture, discussions and role playing exercises. Students also participated in observation sessions and practicum experiences with

children which were arranged on an individual basis.

Unmet Needs

These teaching strategies were adequate, but limited. As enrollments increased from five to twenty-one in a two year period, the scheduling of individual observation sessions became an unwieldly and ineffective process, as many class schedules failed to match the observation activity times. More significantly, the random nature of the observation process prohibited any consistency among observations, thus making the isolation or particular behaviors impossible. Thus, attempts to relate class discussions to student observations were laborious and ineffectual. Finally, student responses on course evaluations indicated a need for additional practice opportunities for the rehearsal of observation and testing procedures.

Objectives

The goal of this project was to improve the effectiveness of the instruction related to the observation and testing of young children with special needs by developing a series of video tapes and related course materials. The specific project objectives were:

1) To accomodate a class size of 30 students.
2) To provide consistency in student observations through simulated observational experiences.
3) To enable students to compare observational data and conclusions by providing a structured, repeatable observation experience which could then be assessed.
4) To enable students to observe actual child assessment sessions.
5) To provide students with the opportunity to observe actual child behaviors thus stimulating discussions, planning and evaluation.

6) To provide students with simulated experiences and opportunities to practice scoring early childhood assessment procedures prior to administration of an actual test.

7) To provide accurate and immediate feedback regarding the effectiveness of the students' scoring and interpretation efforts.

Succes. Criteria.

One statistical measure and several descriptive measures were utilized to determine project effectiveness. An instrument was developed which compared the perceived observational and testing ability of two groups: a control group consisting of students who received the traditional instruction during the Fall 1982 quarter; and an experimental group consisting of students who received the video taped instruction during the Fall 1983 quarter. The null hypothesis (H_o) tested was: there is no difference in perceived ability between the control and experimental groups as measured by a paired t-test of means.

The descriptive measures consisted of random telephone interviews conducted with the experimental group throughout the instruction; a questionnaire administered to the total experimental group at the conclusion of the course; and an analysis of student responses to an essay question, "Please comment on the strengths and weaknesses of the course and suggest course improvements".

Delimitations.

The implementation of an experimental design was limited by the impracticality of randomly sampling groups, a small sample size, and the inability to test students in an actual assessment situation. Also, no pretest was administered to eliminate differences in the entering knowledges or abilities between the groups.

Input Evaluation

Research in Instructional Television

A review of the early research in instructional television reveals a preponderance of "no significant difference" findings. However, television has a number of characteristics which would seem to improve the effectiveness of instruction. Stroller, Lesser and Freedman (1964) suggest that this apparent contradiction between logical analysis and statistical analysis can be attributed to three factors: 1) the research has been sufficiently detailed to reflect upon the logical formulations, 2) there has been an absence of theory directed research, and 3) research has been poorly designed.

In a comprehensive review of the literature, Chu and Schramm (1976) found that "no significant difference" findings dominated even the studies meeting rigid experimental design standards. They suggest that perhaps researchers are asking the wrong questions. Rather than asking whether television can be used to teach, perhaps research should be asking how television can best be used and under what circumstances.

Thus, contrary to McLuhan's premise, the direction of instructional television research has shifted from an emphasis on the medium to an emphasis on the message.

Research and Theory in Instructional Design

Instructional design is a prescriptive rather than an explanatory science. Its purpose is to mediate the application of research findings in the solution of instructional problems, (Winn, 1981). The instructional design process is based upon an analysis of the types of learning required by the content and the attributes of the instructional resources available which will enhance that learning.

Type of Learning: Information

The primary types of learning required in the teaching of assessment skills include information learning and problem solving skills. Information learning refers to the ability of the learner to internalize and access information. (Gagne and Briggs, 1972) Examples of information learning required in the acquisition of assessment skills include purposes of individual assessment instrument, types of scores obtained and the benefits and drawbacks of each instrument.

The manner in which this information is presented can impact the quality and quantity of information learning. Thus, the design of instructional television should consider such factors as manner of organization, cues, simultaneous presentation and the use of attention gaining devices.

Attributes Which Enhance Information Learning:

Organization. The manner in which content is organized affects learning (Winn, 1981). One type of organizational schemata, advance organizers, appears to affect the "incorporability and longevity of meaningful learning" (Ausubel, p. 154). These schemata involve the introduction of relevant concepts before, during and immediately following instruction.

Since excessive note taking during a presentation interfers with learning, course notes were designed to accompany each video tape (Saettler, 1968). The notes consisted of an outline of the essential information with space for some writing thus reducing the need for extensive note taking during the presentation of information.

Cues. Television is a very dense medium; that is, it tends to present more information than the viewer can attend to. Cueing strategies which employ the use of simple external stimuli can emphasize and direct

attention to "key" information. Cueing devices include the use of arrows, pointers, zooms, verbal repetition and inserted questions.

Simultaneous Presentation. The storage and retrieval of information depends upon the interaction of digital, (words or numbers) analogue, (music or sound) and iconic (picture) codes (Schramm, 1977). Since television can make use of all these codes, it would seem that the manner in which the stimuli are presented would impact learning. There is evidence that when the same information is presented through at least two of the codes, learning is facilitated (Nugent, 1983). Particular attention should be given to the information the learner sees and hears. Therefore, unfamiliar terms were presented visually and orally at the same time (simultaneously). Competing forms of information never appeared during explanations.

Attention. Because all students fail to attend to instruction at various intervals, frequent stimulus change can serve as an "attention gaining device". However, it appears that when used solely to gain attention, such devices may actually hinder learning (Schramm, 1977). Thus, frequent stimulus change was utilized throughout the video taped presentations, but only when relevant to the content being presented. Types of attention-gaining devices include alternating between printed and visual information, between expository and student response formats, and between lecture and demonstration strategies.

Types of Learning: Application of Problem Solving Skills

The development of problem solving abilities is a primary function of this course. In the teaching of assessment skills, the end result is the ability to solve a practical problem or class of problems in the absence of guidance. For example, students should be able to determine which child in

a group needs additional assessment after employing observational techniques. Or, given an evaluation report, a student should be able to generate possible handicapping conditions and suggest appropriate educational placements.

Practice. While information learning is a prerequisite for the development of problem solving (Gagne and Briggs, 1974), active participation is critical to mastery of problem solving competencies. Learning is active, not passive, and it appears that learning from television is increased if opportunities for active responses are built into the presentation (Chu and Schramm, 1976). Throughout the demonstration of the testing procedures, learners were required to score the observations provided by the testing simulation. It appears that this activity helps improve general thinking ability by teaching the learner to process the content in a manner required in actual assessment practice (Rothkopf, 1970).

Immediate Knowledge of Results. Upon completion of the testing simulation, the learner is given the correct score, thus providing the learner with frequent self-assessment opportunities. Not only is learning reinforced, but the learner is alerted to potential misunderstandings or misinterpretations which, if unnoticed, could lead to cumulative failure (Bonner, 1983).

Modeling. In a review of the literature studying the effectiveness of modeling as a means of modifying teacher behavior, Young (1969) cited evidence that complex social behavior can be acquired almost entirely through imitation, and that modeling strategies may be more effective than reinforcement strategies. Young also found evidence that video taped models can be an effective method of teaching complex social skills when discrimination between correct and incorrect measures are

incorporated into the instruction. In the video tapes, the instructor served as the model by demonstrating the proper testing procedures, and provided discrimination between correct and incorrect responses during the evaluation. Though the observational tapes included no model, as such, the instructor provided the discrimination feedback during the classroom viewing sessions.

Attributes of Television

Television has certain capabilities important to the teaching of assessment skills. These include concreteness, individual pacing, multimodality, and distributive capabilities.

Concreteness, as opposed to the abstraction of words or numbers, may be television's most significant contribution to learning. Many of the types of learning required in assessment of special needs require realistic visualization. This feature facilitates the association process required for certain types of information learning, such as examples of behaviors at different Piagetian stages. Television can be particularly helpful in the recall of the rules and concepts necessary to evaluate young children effectively by illustrating examplars of appropriate adult-child interactions in an assessment situation. Finally, realistic illustrations help the transfer of previous learning to new situations (Schramm, 1977).

Individualized Pacing. Since students learn at different rates, instruction which is designed by flexible time frames can narrow differences between high and low aptitude learners (Diamond, 1975). Because video tape is a recorded format, the learner can review any information not readily understood, or replay segments to clarify and check the accuracy of their observations. Video tapes can be easily viewed as a

class assignment, freeing class time for questions or diagnosis and remediation of individual problems.

Multimodality. Information can be received in any of three codes: digital (words or numbers); iconic (pictures); and analogue (music and sound). Different media tend to emphasize different codes. For instance, lecture and print emphasize the digital code, whereas radio emphasizes both digital and analogue. However, television can capitalize upon all or any of the three, thus increasing the flexibility of presentation (Schramm, 1977). The nature of television also makes it possible to have instantaneous control over the stimuli (and codes) presented. Print, numbers, sound and/or pictures can appear in any combination and disappear depending upon the demands of the content.

Distributive Qualities. Information can be recorded onto video tape and be used in a variety of settings and a variety of time periods, regardless of "real" time limitations. Thus, a video taped presentation can serve as a surrogate for objects or people not readily available and eliminate the need to take students out of the classroom. The logistical problems associated with scheduling and transportation can be eliminated if the information can be recorded.

Process Evaluation

The Management Plan

The concept of this project originated through a series of informal meetings between the professor of the course and an instructional design specialist employed by the College of Education. Four distinct phases of the management plan can be identified.

The idea phase was dominated by the specification of goals and objectives, evaluation techniques and strategies for gaining administrative approval.

In the design phase, the planning focus shifted to the content and the materials to be produced, the costs and the available resources. At this point, a home economics graduate student became involved with the project. This student assisted with the design of the materials and was trained in video production in exchange for three hours of independent study credit. A proposal was developed which was subsequently approved by the Head of the Home Economics Department and the Dean of the College of Education (see Appendix B). As indicated in the proposal, the primary costs were in the form of professional time. Since production equipment was available, the major dollar expenditures were the costs of the video tapes.

The production phase followed and included both the preproduction and production planning. This step was repeated for each of the seven video tapes produced. The graduate student assumed prime responsibility for the activities within this phase. Preproduction planning included determining which subjects should be video taped, the organization of the video lesson, preparation of graphics, and evaluation of the space and equipment needs. The production planning included the scheduling of people, equipment and facilities.

The review phase followed production. The materials were reviewed, and modifications made if necessary, and the editing process was completed. Upon completion of the first assessment and observation tape series, the materials were pilot tested by a child development senior who had not taken the assessment course. The results of the pilot indicated that the

video tapes could be used independently and that the student's perceptions of the skills she learned were positive.

Evaluation of the Management Plan

Involvement of students in production. This project relied upon the use of students throughout the production process. The graduate student served as both camera operator and editor. Though this required additional training and supervision, both the production and the student benefited from the experience. Not only did the student gain valuable production experience, but the video tapes benefited by having a student in the subject matter area in the position of determining what the viewers would see.

Technical problems. The technical quality of both the production and playback sessions could be improved with the assistance of a qualified television technician. Also, a character genrator would improve the quality of the graphics while decreasing the time required to produce and edit graphics.

Scheduling the Child Development Center. Both morning and afternoon preschool classes are offered at the Montana State University Center. Therefore, video taping sessions were scheduled after 4:00 p.m. or on Saturdays.

Time Required. Eighty hours proved to be an accurate estimate of the time required by the subject matter specialist during the production process. Organizing content, writing an instructionally designed script, producing and participating in the taping take a considerable investment of time when carried out in addition to a full teaching load. However, the benefits of the tapes to the education of students and the opportunity to set up independent laboratory assignments offset the time which was required.

Product Evaluation

Statistical Analysis Results.

Data were collected from 16 students completing the course in Autumn 1982 using the questionnaire in Appendix A. The questionnaire was designed to elicit feedback from students regarding their perception of their competence in using a variety of assessment techniques. The same questionnaire was administered to 21 students in Autumn 1983 as both a pre and post-assessment measure. A paired t-test of means was used to compare students' perceived skill level for each technique.

For those skill/concepts which were taught through in class lecture and demonstration (for example, School Readiness Survey, Home Inventory, parent interview, language transcription) there was no significant difference in student ratings from 1982-1983. For each of the three procedures which were taught through in class demonstration in 1982, and through independent video tape viewing in 1983 (Brigance Inventory, Peabody Picture Vocabulary Test & Preschool Language Scale) there was a significant difference ($p<.01$) in student ratings. Students rated their competency significantly higher when they had been instructed through independent video tape viewing.

On the four assessment techniques which were taught through in-class demonstration in 1982 and through in-class videos and discussion in 1983 (observational techniques, Piagetian assessment (infancy & preschool), and the Birth to Three Scale) there were no significant differences in scores.

Discussion

Interestingly, the statistical data indicate that the video taped instruction and practice produced significant differences in feelings of competence only when they were used independently. The observational tapes

which were used in class with discussion produced no extra gains. One factor which students commented upon was that the opportunity for self-pacing and review was limited in the group session. Another factor might be that the two sets of tapes were designed slightly differently since they were to be used in two different settings. Perhaps giving students the teacher's guide and allowing them to use the observational tapes independently would produce different results. Certainly, more research is needed in matching instructional techniques to particular settings and goals.

Student Attitudes

Three primary measures were used to assess student attitudes toward the video taped instruction. These included random phone interviews, a student questionnaire and an essay question. (Henderson, Morris & Fitz-Gibbon, 1982).

At mid-term, seven of the twenty-one students were contacted for telephone interviews by MSU's Office of Research and Development. The students were asked to respond to six questions. The questions and a summary of the responses are detailed in Appendix C.

A questionnaire was distributed to each student prior to the final examination. The students were expected to return the completed form with their final exam. The instrument and a detailed summary of the responses can be found in Appendix D.

Finally, the students were asked to respond in essay form to the question "Please comment on the strengths and weaknesses of the course and suggest course improvements." Though the students were not specifically asked to comment upon the video tapes, most of the students made unsolicited remarks about them. Though the essays provided little new information, the statements provided insights into the students' attitudes

which were not evident from the questionnaire or interview formats.

Analysis of these instruments reveal several consistencies in student responses. Overall, the students felt that the technical quality of the video tapes was good. However, there were several comments critical of sound and lighting conditions during production. The materials were produced in the Child Development Center in an effort to create a natural environment for the assessment simulation. Though the cameras and microphones were noticable, the children soon forgot the intrusion. Though a studio environment would provide greater control over lighting and sound, it is also a more artificial environment. It is important to weigh the advantages and disadvantages of a 'controlled' production setting in the planning stages. Remote productions will require greater variety in available equipment and materials than a studio production. In this case, directional microphones and dulling sprays would have been advisable.

The most notable critical comments from the students concerned the library viewing environment. The students cited inconsistencies in the quality of the playback machines, distractions and noise in the playback area, and a poor reserve system. It is interesting to note that in their review of the literature Chu and Schramm (1976) found that the quality of the playback environment was consistently poor. Thus, one might deduce that these problems are common to institutions which have not designed facilities to accomodate individualized instructional strategies.

All of the students felt that the video tapes improved their understanding of the material. These comments were consistent with the research in instructional design cited in the review of the literature. Specific comments centered primarily around the concreteness of the medium, the individualized pacing, the opportunities for practice, and observing

the proper techniques as performed by a model. (The material quoted is taken from the student essays).

The students suggested that observing the instructor helped them to learn the "proper techniques required for testing." This was reflected in statements such as "I was impressed with the way you handled Casey's indecision" or "you were able to give positive feedback without telling him if he was right or wrong". Other features which would be unavailable through a lecture include awareness of the wording used by the instructor, body language, an appreciation of the patience and the need for adequate preparation of materials.

Several students mentioned the benefits of self pacing and the individualized format. "It lends itself to collecting as much or as little information as needed". However, some students indicated that the video tapes contained too much information which required too much time in an uncomfortable viewing condition.

The students stated that they benefited from the practice opportunities. "I really learned a lot by actually doing it myself" and "I am more prepared to do an assessment from this experience" were common statements. An interesting spinoff of this feature was the frequency with which students indicated a need for more practice. Statements such as "I wouldn't attempt this without <u>lots</u> of practice" were more frequent than in classes which did not view the video tapes.

The students also indicated that the course notes were helpful, particularly for future reference. Though some felt that the notes were not detailed enough, others preferred less detail.

At least two of the students suggested that the video tapes changed previously negative attitudes toward standardized tests. "I saw that standardized tests directions can be humanly administered". Another

student made this comment: "In spite of my negative feelings, it was a nice open experience to view them (the tests) being administered - the one-to-one time that a teacher would experience while involved with a child at these tasks would be valuable in itself."

Summary

Based upon the data generated from this project, it appears that the video tapes and course materials improved the effectiveness of this instruction, as preceived by the students enrolled in the course. The materials developed for this course satisfied all of the objectives of the project. However, the data indicates that the provision of consistent and structured in-class observational experiences (Objective #2 and Objective #3) did not contribute to the instructional effectiveness of the course.

A review of the literature reveals only scant research in the use of video taped instruction in the teaching of assessment skills. Though the results of this evaluation support the use of video taped instruction, more data is needed.

A longitudinal study comparing the assessment skills of the students who have taken HEC 469 before and after the implementation of the video tapes would reveal information regarding the effectiveness of the instruction in an actual test environment. Data should continue to be gathered from the students enrolled in HEC 469 which might explain the discrepancy between the effects of the observational and assessment video tapes.

Institutions can support instructional design by providing technical support throughout the production and implentation phase, and by designing viewing facilities which are suitable learning environments.

The results of this project also supports the active participation of faculty and students in all phases of the development process, including the design, production, implementation and evaluation. Institutions should reward such participation through a system of incentives which encourage faculty participation. Students should continue to be utilized through graduate assistantships, work study, and individual projects or internships. Finally, the instructional design process should continue to seek both quantitative evaluative information from the students enrolled in the course.

BIBLIOGRAPHY

Ausubel, David P. The Use of Advanced Organizers in the Learning and Retention of Meaningful Verbal Material. In Merlin C. Wittrock (Ed.), Learning and Instruction. Berkeley, California: McCutchen Publishing Company, 1977.

Bonner, Jodi. Systematic Lesson Design for Adult Learners. Journal of Instructional Development, 6 (1), 34-42.

Chu, Goodwin and Schramm, Wilbur. Learning from Television: What the Research Says. Revised Edition. Association of Educational Broadcasters Washington, D.C. Stanford University, Institute for Communications Research, 1975.

Diamond, Robert, et. al. Instructional Design for Individualized Instruction in Higher Education. Englewood Cliffs, New Jersey: Educational Technology Publications, 1975.

Gagne, Robert M. and Briggs, Leslie J. Principles of Instructional Design. New York: Holt, Rinehart and Winston, Inc. 1974.

Henderson, Marlene E., Morris L. and Fitz-Gibbon, Carol. How to Measure Attitudes. Center for the Study of Evaluation, University of California. Beverly Hills: Sage Publications, 1978.

Rothkopf, Ernst Z. The Concept of Mathemagenic Activities. In Merlin C. Wittrock (Ed.), Learning and Instruction. Berkeley, California: McCutchen Publishing Company, 1977.

Saettler, Paul, A History of Instructional Technology. New York: McGraw-Hill Company, 1977.

Schramm, Wilbur. The Researcher and Producer in ETV. Public Telecommunications Review, July/August, 1977, 11-21.

Stoller, Nathan, Lesser, Gerald S. and Freedman, Philip I. A Comparison of Methods of Observation in Preservice Teacher Training. Audio Visual Communications Review, 1964, 177-197.

Young, David B. The Modification of Teacher Behavior Using Audio Video-Taped Models in a Micro-Teaching Sequence. Educational Leadership, January 1969, 394-403.

Webster, William J. The Evaluation of Instructional Materials. Washington, D.C.: Association of Educational Communications and Technology, 1976.

Winn, William. The Meaningful Organization of Content: Research and Design Strategies. Educational Technology, 21 (8), 7-11.

APPENDIX A

Student Competence Questionnaire

Put an X on the number that best describes your competence at the beginning of the course, and circle around the number that best describes your current level of competence.

Please note how competent you feel in performing the following types of assessments on the following scale.

1 = I have no awareness of this technique

2 = I am aware of this technique, but do not have enough knowledge/ practice to use it

3 = I have a beginning competence in using this technique tool but need more training

4 = I have enough information about this technique, but need more practice.

5 = I am very comfortable in using this technique/tool and need no further training or practice.

Observational Techniques	1	2	3	4	5
Piagetian Assessment (Infancy)	1	2	3	4	5
Piagetian Assessment (Preschool and Older)	1	2	3	4	5
Evaluating Test Results	1	2	3	4	5
Language Transcription	1	2	3	4	5
Developing a Child Find Program	1	2	3	4	5
Writing IEP's	1	2	3	4	5
Parent Interview	1	2	3	4	5
Using Specific Assessment Tools:					
Home Inventory	1	2	3	4	5
Peabody Picture Vocabulary Test	1	2	3	4	5
Peabody Individual Achievement Test	1	2	3	4	5
Birth - Three Scale	1	2	3	4	5
Brigance Inventory	1	2	3	4	5
Preschool Language Scale	1	2	3	4	5
School Readiness Survey	1	2	3	4	5

APPENDIX B

Proposal Format and Cost Estimates

PROPOSAL

Instructional Design for the Assessment
of Special Needs in Early Childhood

by

Connie Dillon
Susan Workman

PURPOSE: To plan and produce a series of video tapes which will demonstrate and describe four Early Childhood Assessment Instruments. To develop a series of video tapes representing actual child behaviors. These video tapes provide students with simulation experience in interview and observational techniques and Plagetian assessment recording.

RATIONALE: 1) To meet the demands of increasing enrollments while providing student with experience in skill application and assessment techniques.

2) To provide video taped demonstration of techniques for proper application of instruments.

MEDIA USED: A. Demonstration of Early Childhood Assessment Instruments (Preschool Language Scale, School Readiness Survey, PPVT, Birth-3)

1. Tape Outline
   a. description and demonstration of the instrument by subject matter specialists.
   b. demonstration of the application of the instrument.
   c. demonstration of scoring procedures.

2. Use: In class, or individual use as outside assignment or as review.

B. Simulation Tapes

1. Tape Outline
   a. record actual child behaviors
   b. assemble, edit relevant behaviors onto edited tapes with appropriate graphics.
   c. accompanying written materials to supplement video tapes.

2. Use: In class in small group settings.

EVALUATION: Compare learning before and after implementation, interviews with the students, (increases in class enrollment) comparison of student ratings of skills in a class conducted without video tapes -vs- with video tapes.

ESTIMATED COSTS

(Based on 10 tapes, 4 hours production each and 8 hours editing each)

COST	MATERIALS NEEDED	SUPPORTED BY
$176	Eight 60 minute video tapes	Home Economics
$100	Graphics Supplies (posterboard, lettering tape	Home Economics
	FACILITY	
	Child Development Center	
	PERSONNEL	
80 hours	Subject Matter Specialist/Producer	Home Economics
40 hours	Instructional Design/Director	College of Education
	EQUIPMENT	
40 hours	Color Camera	Home Economics
40 hours	Color Recorder	Home Economics
40 hours	Lights	Home Economics
80 hours	Editing System	College of Education
	EVALUATION	
20 hours	Subject Matter Specialists	Home Economics
20 hours	Instructional Design Consultant	College of Education

APPENDIX C

TELEPHONE INTERVIEWS

TELEPHONE INTERVIEW

QUESTIONS

1. Please comment on the technical quality of the video tapes.

2. Have the video tapes helped or hindered your understanding of the materials?

3. Please comment on the viewing conditions.

4. Please comment on the notes.

5. Was the sequencing of the information within the tapes logical or difficult to follow?

6. How might the video tapes be improved?

RANDOM PHONE INTERVIEW

Summary of Responses

Overall, the students felt that the technical quality of the tapes were good. The most significant comments pertained to the inability to see the pictures on the test instruments during the testing setting.

All of the students questioned felt that the video tapes helped their understanding of the material. When asked why, the responses centered around three primary features. First, the students indicated that they gained from observing a model administer the tapes properly. Second, the students felt it was helpful to "see the child in action". They learned the importance of the wording used by the person giving the test, they saw that the child responses were often unpredictable, and thus felt more prepared to administer the tests themselves. Finally, the students felt that the ability to review the tapes as needed was a positive feature of the video taped format.

Many of the students were critical of the viewing conditions. Interestingly enough, this is a common criticism of instructional television, as it seems that producers and developers tend to emphasize "what goes into the tapes" without considering the conditions in which the tapes are viewed. The students sampled in this interview complained that the library viewing environment was distracting and that the equipment often failed to work.

The majority of the students indicated that the notes were helpful. While some preferred more detail, others suggested that the notes were too detailed.

All of the students indicated that the information presented within the tapes was logical and easy to follow.

The students made several suggestions for improving the video tapes, including more close ups, more detailed notes and proceeding at a slower pace. Finally, the students indicated a need to see children with a range of abilities and developmental levels.

APPENDIX D

STUDENT VIDEO TAPE EVALUATION QUESTIONNAIRE

HEC 469
ASSESSMENT OF SPECIAL NEEDS IN EARLY CHILDHOOD
EVALUATION OF COURSE MATERIALS

	Strongly Agree				Strongly Agree	Average Response
1. The information presented in the video taped (television) material was clear.	1	2	3	4	5	1.4
2. I want to learn more about this subject.	1	2	3	4	5	1.7
3. I am <u>not</u> satisfied with the information presented in the video taped materials.	1	2	3	4	5	4.5
4. Video tape is an appropriate medium for delivery of this content.	1	2	3	4	5	1.7

5. The video presentations were:

							Average Response
a. Too long	1	2	3	4	5	Too short	2.9
b. Professional	1	2	3	4	5	Amateurish	1.9
c. Too slow (pacing)	1	2	3	4	5	Too fast (pacing)	3.2
d. Interesting	1	2	3	4	5	Boring	1.4

6. Please rate the following:	Excellent				Poor	Average Response
a. Picture quality	1	2	3	4	5	2.8
b. Color	1	2	3	4	5	2.4
c. Image size on monitor	1	2	3	4	5	1.8
d. Viewing conditions	1	2	3	4	5	3.3
e. Use of camera	1	2	3	4	5	2.0
f. Use of graphics	1	2	3	4	5	2.2
g. Effectiveness of subject matter specialist on television	1	2	3	4	5	1.4

7. Please rate the following according to the effectiveness in helping you achieve the objectives:

	Very Uneffective				Very Effective	Average Response
a. Video lectures.	1	2	3	4	5	4.4
b. Classroom lecture.	1	2	3	4	5	4.6

c. Course notes.	1	2	3	4	5	4.1
d. Video observation.	1	2	3	4	5	4.4
e. Class discussions.	1	2	3	4	5	4.5
f. Assessment practice opportunities.	1	2	3	4	5	4.6

OPEN RESPONSE QUESTIONS

8. Were any of the video (television) characteristics particularly bothersome or helpful? If so, please describe. [() indicates number of similar responses]

Tired Kids
Poor Sound (2)
Very helpful
Reserve personnel unorganized
Playback quality (6)
Didn't like the music
Poor playback conditions (2)
Glare on manual (8)
Poor background
At times hard to see the child

9. Do you have any suggestions for improving the video taped (television) instruction?

Good
More reference to page numbers of test items being used
Very helpful - concrete
Good - could not have viewed the same in real life
Helpful

10. Do you have any suggestions for improving the course notes?

Good organized content
Great, clear and concise
Learned more from practical experiences and discussion
More detailed outline format on the more difficult tapes
Would like a packet

STUDENT QUESTIONNAIRE

Summary of Responses

The most notable critical comments from the students (consistent with the random phone interview responses) was in reference to the playback environment. Students cited inconsistency in the quality of the playback machines, distractions and noise in the playback area, and a poor reserve system. It must be noted that these factors are common to institutions new to individualized instruction. Finally, it should be noted that the technical problems experienced would have been dimished with the skills of a television technician responsible for the upkeep of production and playback equipment.

Students were also critical of the sound and lighting characteristics, citing the glare on the manuals as particularly bothersome. The decision to produce the materials in the Child Development Center aggrevated those difficulties since sound and lighting conditions can be controlled more adequately in a studion environment. However, taking the subjects from a natural setting may cause them to react artifically, thus decreasing the value of the observation experience. Glossy materials are a problem, especially when a single camera is used. However, certain dulling sprays designed for textual materials may be available.

Sound was a problem when recording the observation sessions due to the size of the room and the noise from the other children. This problem may be alleviated in the future with the purchase of a directional or 'shotgun' microphone.

The responses relative to the clarity and quality of the information were rated very high. The pacing and the length appears adequate. Ranking of the effectiveness of the various segments shows that the students felt the classroom lectures and practice opportunities were the most helpful

segments, (average response of 4.6) followed by the class discussions, (average response of 4.5) the video lectures and observations, (average response of 4.4). The course notes received the lowest ranking, (average response of 4.1).